



# UNITED STATES PATENT AND TRADEMARK OFFICE

51  
UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/875,458	06/05/2001	Craig F. Culver	IMM059A	6909
7590	09/29/2004		EXAMINER	
Kilpatrick Stockton 1001 West Fourth Street Winston-Salem, NC 27101-2400			WU, XIAO MIN	
			ART UNIT	PAPER NUMBER
			2674	

DATE MAILED: 09/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/875,458

Applicant(s)

CULVER, CRAIG F.

Examiner

XIAO M. WU

Art Unit

2674

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 August 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 23-34 and 58-79 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 23-34 and 58-79 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Continued Examination Under 37 CFR 1.114*

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 8/25/2004 has been entered.
2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.
3. Claims 23-27, 31, 33, 59-65, 67-70 are rejected under 35 U.S.C. 102(e) as being anticipated by Kuenzner et al. (US Patent No. 5,956,016).

As to claim 23, 59, 67, 68, 70, Kuenzner discloses an apparatus (Fig. 1) comprising: a manipulandum (5, 9) moveable in at least one degree of freedom; a sensor (13, Fig. 1, also see col. 2, lines 56-57) operable to detect a position of the manipulandum and a deviation of the manipulandum from the position and output a first sensor signal associated with the deviation of the manipulandum from the position; an actuator (13, Fig. 1, also see col. 2, lines 58-60) operable to provide tactile feedback to the manipulandum associated with the first sensor signal; and a first processor (not shown, see col. 2, lines 60-67) operable to control the actuator and to receive the first sensor signal from the sensor.

As to claim 24, Kuenzner discloses the manipulandum comprises a roller (Fig. 22, Fig. 6).

As to claim 25, Kuenzner discloses that the roller (22) communicates an electrical signal output to the first processor (not shown, see col. 3, lines 53-67).

As to claims 26, 27, Kuenzner discloses that the roller (22) is moveable in two degrees of freedom (col. 2, lines 53-56).

As to claim 31, Kuenzner discloses the processor included in a computer (see Fig. 7).

As to claim 33, Kuenzner discloses that the device is an electronic device.

As to claims 60-65, 69, Kuenzner discloses a position control mapping mode and to control a rate of change of the value in a rate control mapping mode. For example, Kuenzner discloses that the electric motor 13 can be controlled by position detection, so that the motor, in a central motion area of pusher 9, in other words far from the stop provided by frame 7, applies a torque to toothed belt 12 and hence to pusher 9 that is directed opposite to the frictional torque produced by friction of the elements moved by the pusher 9 such as guide 6' and toothed belt 12. when pusher move toward frame 7, instead of a reinforcing torque, a torque can be applied that reinforces the action of these frictional torques by its own action. The operator then receives additional tactile feedback indicating the position of pusher within the entire movement range defined by the two stops on frame 7 (see col. 2, line 52 to col. 3, line 5).

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

Art Unit: 2674

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kuenzner et al. (US Patent No. 5,956,016) in view of Stobbs (US Patent No. 5,631,669).

As to claim 29, it is noted that Kuenzner does not disclose a microphone. Stobbs is cited to teach an input device similar to Rosenberg. Stobbs discloses a microphone within the input device. It would have been obvious to one of ordinary skill in the art to have modified Kuenzner with the features of the microphone as taught by Stobbs so as to input a voice command to the computer.

6. Claims 28, 30, 32, 34, 58, 66, 71-79 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuenzner et al. (US Patent No. 5,956,016) in view of Dunaway (US Patent No. 5,450,079).

As to claims 34, 66, 71, note the discussion of Kuenzner above. Kuenzner does not disclose that the device is a remote device in communication with a second processor. Dunaway is cited to teach a remote input device for controlling the menu or the screen which comprises a second processor (72). The second processor is a host computer which controls the first processor (e.g. the local processor 62) similar to applicant. It would have been obvious to one of ordinary skill in the art to have modified Kuenzner with the features of the remote input device as taught by Dunaway because Dunaway provide an input device can be operable in a free space.

As to claim 72, Kuenzner discloses that the roller (22) is moveable in two degrees of freedom (col. 2, lines 53-56).

As to claim 73, Kuenzner discloses that the deviation values are obtained from two degrees movements in which two starting positions and two ending positions are needed.

As to claims 74-79, Kuenzner discloses a position control mapping mode and to control a rate of change of the value in a rate control mapping mode. For example, Kuenzner discloses that the electric motor 13 can be controlled by position detection, so that the motor, in a central motion area of pusher 9, in other words far from the stop provided by frame 7, applies a torque to toothed belt 12 and hence to pusher 9 that is directed opposite to the frictional torque produced by friction of the elements moved by the pusher 9 such as guide 6' and toothed belt 12. when pusher move toward frame 7, instead of a reinforcing torque, a torque can be applied that reinforces the action of these frictional torques by its own action. The operator then receives additional tactile feedback indicating the position of pusher within the entire movement range defined by the two stops on frame 7 (see col. 2, line 52 to col. 3, line 5).

As to claims 28, 58, Dunaway discloses the input device including a local display screen with touch panel

As to claim 30, Kuenzner's cursor control device could be used for playing game on the screen.

As to claim 32, it would have been obvious to include a Web-access device for Kuenzner since the Web-access can provide information to the user such as checking email, or searching.

### ***Response to Arguments***

7. Applicant's arguments with respect to claims 23-34, 58-79 have been considered but are moot in view of the new ground(s) of rejection.

Art Unit: 2674

***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The US Patent No. 4,868,549 is cited to teach a feedback mouse device.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Xiao Wu whose telephone number is (703) 305-4721.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Shalwala Bipin**, can be reached on (703) 305-4938.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks  
Washington, D.C. 20231

**or faxed to:**


**(703) 872-9306**

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377

xw

September 28, 2004

  
**XIAO WU**  
**PRIMARY EXAMINER**  
**ART UNIT 2674**